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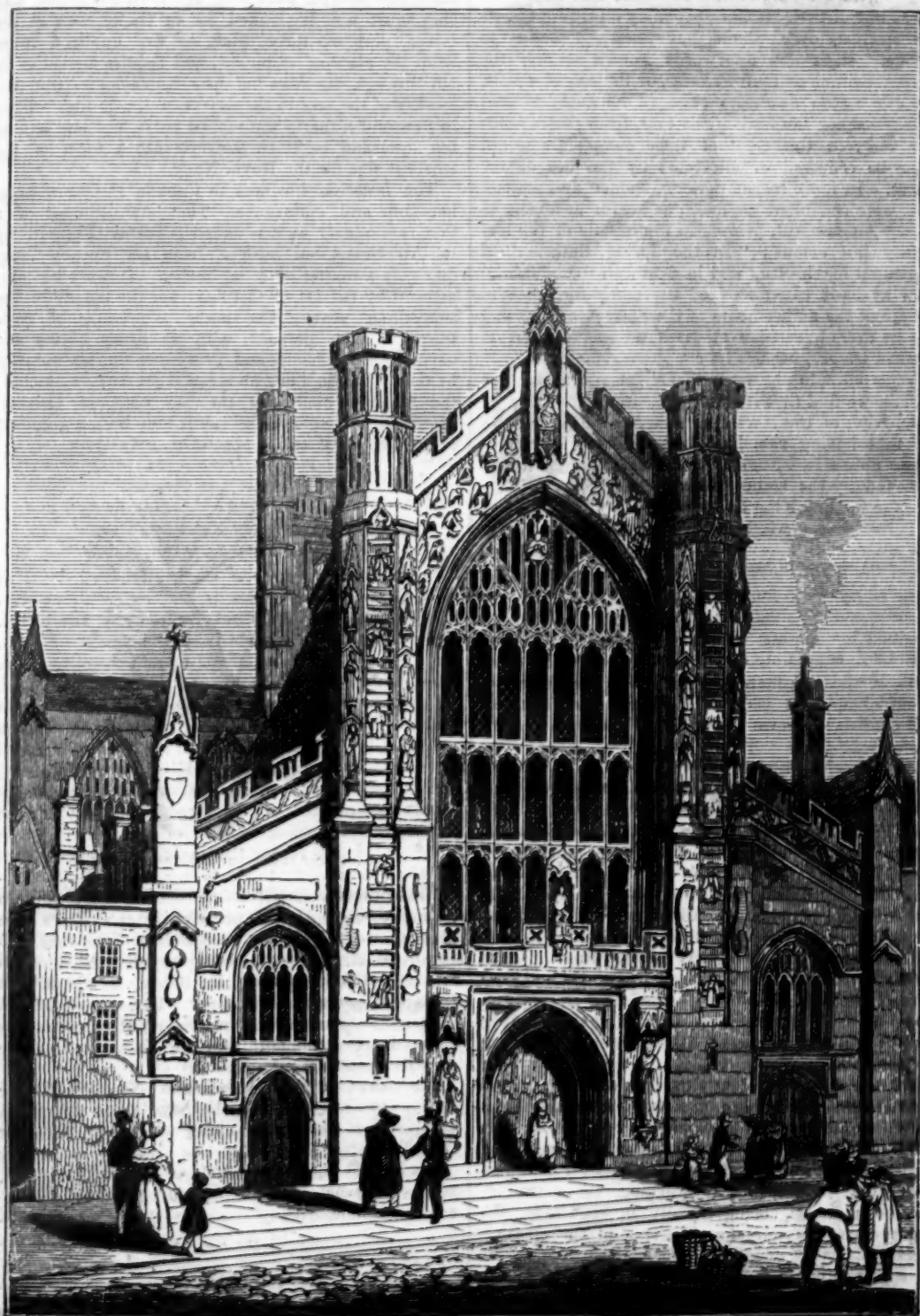
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ONE PENNY.



ABBAY CHURCH BATH WEST FRONT.

THE ABBEY CHURCH OF BATH.

"THE diocese of Bath and Wells," says Peter Heylin, "though it hath a double name, is one single bishopric. The bishop's seat was originally at Wells, where it still continues. The style of Bath came in but upon the bye."

The spot on which the Abbey Church now stands is supposed to have been the site of a temple of Minerva, in the time of the Romans, who chose this city as one of their stations, probably on account of its fine springs, over which they imagined Pallas to preside. Bath was afterwards known among the ancient Britons as *Caer Pallader*, or the city of Pallas. But our Saxon ancestors changed its name to *Ake-mannceaster*, or the *Sick Man's City*, from the invalids who resorted thither, that their complaints might either be removed or alleviated by the use of the waters. In more recent periods, fashion and amusement were consulted as much as health in a visit to Bath. An account, printed in the middle of the last century, informs us; "In the Spring, Bath is most frequented for health, and in Autumn for pleasure, when at least two-thirds of the company come to partake of the amusements of the place; and in some seasons there have been at Bath no less than *eight thousand persons*, besides its constant inhabitants."

Going back to the early history of the monastery of Bath, we find that it was founded as a nunnery by Osric, King of the Northumbrians, in the year 676; and that having remained under the presidency of certain abbesses, whose names are preserved, it was destroyed by the Danes, and rebuilt, about 775, by Offa, the famous King of Mercia, who dedicated it to St. Peter, placing within it secular canons.

It underwent another change towards the latter part of the tenth century, when King Edgar removed the secular canons, and fixed in their room an abbot, and Benedictine monks.

During the abbacy of Ælfsig, (or Alsius,) on the Domesday survey of the abbey property being taken, the annual revenue of the lands amounted to 71*l.* 13*s.* 6*d.*

In 1088, in the rebellion in favour of Robert, the eldest son of the Conqueror, Bath, with its religious house, was plundered and burnt. About this time, as we have had occasion to state in our previous notices of Cathedrals, it was ordained, for the dignity and usefulness of the church, that certain bishops' sees should be removed from small towns to places of greater note, among which the episcopal see of Wells was transferred to Bath; John de Villula, or, as he is sometimes called, *Tours*, (the French town of which he was a native,) having been empowered, by a charter from William Rufus, to carry this change into effect. The king also granted him the city of Bath, a mint and other rights, for the purpose of augmenting the see;—an example followed by Henry the First, who showed great favour to Bishop John. This munificent prelate had been Bishop of Wells, a title which he dropped on becoming Bishop of Bath in 1090. He greatly enriched the monastery, and directed that it should thenceforth be governed by a prior instead of an abbot: adding to its convenience by building two baths* within its pre-

dicts, and a palace for his own residence. He also began, if he did not complete, the church on a costly and extensive scale; and at his death, in 1123, was buried in the middle of the choir. A noble tomb to his memory, with his statue resting upon it, was in existence until the Reformation.

After this bishop's death, the church was again destroyed by fire; but was rebuilt and enlarged by Robert, a monk of Lewes, on his appointment to the bishopric, about the year 1140. The next bishop who became a patron to this see, was Dr. Oliver King, translated from Exeter to Bath in 1495. In consequence, it is alleged, of a vision which he beheld, he resolved to build the church of St. Peter in the most correct, and at the same time, splendid style. This Oliver King had been principal secretary to Edward the Fourth, Edward the Fifth, and Henry the Seventh, at a time when our English architecture was carried to an excess in finishing, which marks the works of that period, particularly the chapel of Henry the Seventh, at Westminster. In his reported vision, of which Sir John Harrington has chronicled up an account, and which seems to have suggested the beautiful ornaments of the grand Western front; "The bishop, having been at Bath, saw, in his dream, angels ascending and descending a ladder, near to which was a fair olive-tree, supporting a crown; and he thought he heard a voice saying, 'Let the Olive establish the crown, and a King restore the church.'" Another strange and forced allusion to the name of the founder of the present fabric was taken from the parable of Jotham (Judges ix. 8); and the following lines, accordingly, cut upon a stone on the west side;—

The trees going to chese† a king,
Said, Be thou to us, Oliver, King!

But though this prelate carried forward the work with all the activity in his power, and with a liberal outlay of money, he did not live to see it completed. It remained to be finished by the priors of Bath, after his death. Prior Bird, after expending large sums upon it, died blind and poor. His rebus, W. and a Bird, are to be seen, cut in stone in different parts of the building. A chapel and tomb dedicated to him, still exist, and are greatly admired for their richness and beauty. His successor, Holway, *alias* Gibbes, also applied himself with zeal and energy to the completion of King's design; but it was scarcely finished when he, with others, subscribed to the supremacy of Henry the Eighth, and surrendered the whole monastery to the crown. The king's commissioners subsequently offered St. Peter's Church to the city of Bath for five hundred marks, which were refused; whereupon all the glass, iron, and lead, belonging to it, were sold to merchants, the skeleton only of the building being left standing, which, with the monastery, was purchased by Humphry Collis, in 1542. The year after, an Act of Parliament was passed for the dean and chapter of Wells to make one sole chapter for the bishop.

The fabric having become sadly dilapidated after the period of the dissolution, Mr. Peter Chapman was the first person who began to repair it, about 1572, at the east end, to secure it from the effects of the weather. Under the auspices of Queen Elizabeth, who enabled the citizens to raise money for its restoration, Thomas, Earl of Sussex, her majesty's chamberlain, did much in its behalf, and was followed by others, especially by William, Lord Burleigh. Thus the Choir was completed for divine service, and

The adventurer, however, who had been induced to search, and whose name was Swallow, failed of success; and the spring remains concealed to this time.

† Old word for choose.

* One of these baths John gave for the benefit of the public; the other was appropriated to the prior. They continued in use till the middle of the sixteenth century. An attempt was made, in the early part of the eighteenth century, to recover the prior's bath spring, in consequence of the following passage in the particulars of the priory estate, made just before the sale of it in 1614. "There is a bath which was for the prior's private use, but it is now filled up with rubble, and covered with earth, and of no use; but there be many of the town that do remember when it was of great use, for there is as hot a spring in it as in any of the baths; and a little charge will restore it to its former virtue, and fit it for use."

the church reconsecrated, under the names of St. Peter and St. Paul. Various patrons, among whom may be mentioned Dr. James Montague, Bishop of Bath and Wells, his brother, Sir Henry Montague, chief justice of the King's Bench, and Sir Nicholas Salterns, Knt., of London, contributed their aid and means to the following portions of the structure:—The side aisles of the choir, and the transepts; the western portion of the nave; the beautiful west door; and the vestry. Thus, by the assistance of these benefactors, Bath Abbey Church was raised to the state in which we now behold it.

From the number of the windows, it was formerly called the *Lantern of England*. It is built in the form of a plain cross, with a magnificent tower at the intersection. This tower is peculiar for its not being square, but greater in the north and south, than the east and west dimensions. The transept is narrow, and has no aisles. The nave and choir have each a north and south aisle. There is no trace of tombs in the choir, which is fitted up as a parish-church, with the addition of a throne for the Bishop of Bath and Wells, when he occasionally attends divine service within it.

The window at the east end of the south aisle is inserted in a niche, which appears to be Norman, and is probably the only remains of a more ancient edifice. The west front, as represented by our engraving, is better seen than any other part, but by no means at a sufficient distance for its full effect. The north side is much built up with small houses, and the south partially so. The east, in consequence of its situation, appears but to little advantage; and from no point can the whole building be seen so as to do justice to its exquisite tower.

Bath Abbey Church is distinguished for the beauty of its design, and for the harmony and symmetry of its several parts. It is supposed to have been the last edifice of considerable magnitude, purely Gothic, which was erected in this country; and almost the only one which remains in the state in which it was originally planned.

The following are stated in Dugdale to be the dimensions:—

	Feet.
Length from east to west	210
Length of the transept from north to south	126
Breadth of the body and aisles	72
Height of the tower	152
Height of the roof	78

The whole of the Abbey-house was demolished in 1755, and the foundations removed for other buildings. On that occasion several ancient stone coffins were dug up, and the Roman baths, which had lain hid for a very long period, were brought to view. M.

As great and exalted spirits undertake the pursuit of hazardous actions for the good of others, at the same time gratifying their passion for glory,—so do worthy minds in the domestic way of life deny themselves many advantages, to satisfy a generous benevolence which they bear to their friends oppressed with distresses and calamities. Such natures one may call "stores of Providence," which are actuated by a secret celestial influence to undervalue the ordinary gratifications of wealth, to give comfort to a heart loaded with affliction, to save a falling family, to preserve a branch of trade in their neighbourhood, to give work to the industrious, preserve the portion of the helpless infant, and raise the head of the mourning father. People whose hearts are wholly bent towards pleasure, or intent upon gain, never hear of the noble occurrences among men of industry and humanity.—*Spectator*.

He is the true man of honour, who keeps steadily in the path of virtue, and braves the laugh of the world.—GILPIN.

CONSTITUTION OF THE ATMOSPHERE.

MAN, forgetting how insignificant he is, and how limited his utmost knowledge, is too apt to measure Omnipotence by the standard of his own narrow intellect; and to be guided by his own selfish feelings, in judging of the extent of Divine benevolence. That the earth, a minute fraction, as it is, of a great and wonderful system, should be amenable to the general laws by which the whole system is governed, is, at the least, exceedingly probable. Of such general laws, of their changes, of their aberrations, or of their influences, we, situated in this extremity of the universe, cannot see the object. What, therefore, appear to us anomalous or defective, may, in reality, be parts of some great cycle or series, too vast to be comprehended by the human mind, and known only to beings of a higher order, or to the Creator himself. So, again, amidst the desolation of the hurricane, or of the thunder-storm; in the settled affliction of malaria, and in the march of the pestilence; the goodness of the Deity is impugned, his power, even, is regarded doubtfully. But what, in truth, are all these visitations, but so many examples of the "unsearchable ways" of the Almighty? "He sits on the whirlwind, and directs the storm:" a hamlet is laid waste; a few individuals may perish; but the general result is good: the atmosphere is purified; and pestilence, with all its train of evils, disappears. Nay, however inscrutable the object of the deadly malaria itself, do we not see one end which it serves, namely, to stimulate the reasoning powers, and the industry of man. By his reason, man has been guided to an antidote beneficially adapted for his use, which has stripped malaria of half its terrors. By his industry, the marsh has been converted into fertile land, and disease has given place to salubrity.

When, therefore, we duly consider all these things, when we reflect also on the number, the properties, the various conditions of the matters composing our globe, the wonder surely is, not that a few of these matters occasionally exist as foreign bodies in the atmosphere, but that others of these matters are not at all times diffused through it, and in such quantity as to be incompatible with organic life. Thus, the original constitution of the atmosphere, and the preservation of its purity against all these contaminating influences, may be viewed as the strongest arguments we possess, in demonstration of the benevolence, the wisdom, and the omnipotence of the Deity: benevolence in having willed such a positive good; wisdom in having contrived it; and omnipotence in having created it, and in still upholding its existence.

[Prou's *Bridgewater Treatise*.]

THE BLIGHTED OAK.

HAST thou seen in Winter's stormiest sky
The trunk of a blighted Oak,
Not dead, but sinking in slow decay,
Beneath Time's resistless stroke,
Round which a luxuriant ivy had grown,
And wreathed it with verdure no longer its own?
Perchance thou hast seen this sight—and then,
As I at thy years might do,
Passed carelessly by, nor turned again
That scathed wreck to view;
But now I can draw from that perishing tree,
Thoughts which are soothing and dear to me.
Oh! smile not, nor think it a worthless thing,
If it be with instruction fraught;
That which will closest and longest cling,
Is alone worth a serious thought;
Should aught be unlovely which thus can shed,
Grace o'er the dying, and leaves o'er the dead?

BERNARD BARTON.

THE YOUNG CHEMIST.

No. VII.

IN Davy's "wonderful lamp," the flame, like a confined bird, flutters against every bar of its cage, in the attempt at finding some aperture large enough to allow of its escape; but in vain. Although the heat of the flame is thus arrested, yet its light readily passes; and it is to the light of flame that I now wish to direct your attention.

Now, you will be much better able to understand what I have to say about this matter, if I first of all explain to you the meaning of the terms *ignition* and *combustion*, for they by no means signify the same thing, although very often but very improperly used indiscriminately.

Here is a little tin lamp with a single cotton wick, just like an oil-lamp; but instead of filling it with oil, I will fill it with strong spirits of wine, (or very strong brandy will do as well,) the flame of which will be very convenient for the experiments I am now going to make.

I will light this "spirit-lamp;" you see it burns with a pale flame; let us shut the shutters so as to darken the room: there, now attempt to read this book, or that written paper by its light: you can scarcely make out a single letter;—the flame, unlike that of the candle, gives scarcely any light. Well, then, as it gives so little light, perhaps you may think that it is not very hot, but you are wrong there; for it is very hot indeed. See, here is a bit of clay tobacco-pipe, and I have ground it on a grindstone to a very slender point; not much bigger than a pin's point: this requires a little care to do, but it can be done easily, after one or two trials.

I now hold this slender clay point in the pale spirit-flame: look, it instantly becomes *red-hot*; now it is *white-hot* at the very point, which glows brilliantly.

This is a simple instance of *ignition*, or *incandescence*, as it is also called; each term expressing a property which some bodies have of giving out light, when heated to a high degree. Clay has this singular property; and remember this curious fact, that it suffers no change in its nature by *ignition*. If a chemist had accurately examined or analyzed this piece of clay, before we made our experiment, and I gave it to him again after the ignition, that he might examine it, he would tell me that it was still clay, a trifle harder, perhaps, than before; but still clay, or, as he would call it, *alumina*.

I have here some fine and perfectly bright iron-filings: I put them into this empty tin pepper-box, put on the cover, and now dredge or shake them into the spirit-flame. Look what brilliant sparks appear; showers of them,—just like a fire-work. How are they produced? Why, by the iron *burning*; this, then, is an instance of *combustion*.

I now set the spirit-lamp in the middle of this sheet of white paper, and very slowly shake a very few filings into the flame, so that they may be more completely burned. Now let us collect what has fallen on the white paper: are they iron-filings? no; the iron-filings were bright,—these little particles are black and brittle: look, they will crush to powder if I press them hard with the blade of this knife upon an earthenware plate.

In this simple way of experimenting, then, we evidently see that the iron by *combustion* has undergone a change. A chemist, if he examined the result, would tell you that it is no longer pure iron, but iron combined with *oxygen* (which is one of the elements of the air we breathe); he would call it *oxide of iron*.

Well, then, let us conclude that *ignition* does not alter the nature of some substances, but that *combustion* always does. Look at this wax-candle, probably weighing four or six ounces: is not its nature changed by combustion? Most certainly it is; and most wonderfully altered. This candle will go on burning and burning, till at length it is extinguished, and you say it is "burnt out." But what has become of the wax? Why, the wax has undergone *combustion*; it is totally changed in its nature, and converted into invisible *gases*, and *water*! Yes, *gases* and *water* are thus formed by flame: this I will fully discuss on a future occasion; but just now it will be sufficient to show you how we can detect the water.

Here is a large glass tumbler, perfectly dry, clean, and cold. I hold it over the candle-flame for a few seconds: look, the inside of the glass becomes quite misty and damp,—quite a dew upon its surface. Why? Because the water formed by the combustion of the wax, arises in the state of hot vapour; and when I hold the cold glass over the flame, the vapour *condenses* on the cold surface, and forms drops of liquid water.

When I held the point of clay, or when I sifted the iron-filings into the spirit-flame, you must have noticed that in both cases the flame was rendered much more luminous. Chemists have determined, by far more accurate experiments than we can pretend to make, that the *light* of flames depends upon *solid matter*, existing in the combustible body; the *ignition*, and oftentimes also *combustion* of which solid matter, evolves light.

You will easily understand this, I think, if I make one or two simple experiments, and remember, that in all cases, I only show you such experiments as you can easily repeat, without regular apparatus, as it is called; my object is to suit these remarks and illustrations to every capacity, so that the humblest individual, if he be so minded, may experiment for himself without expense or difficulty, and thus gain an insight into some of the mysteries of the most fascinating of all sciences, "Experimental Chemistry," "whose beginning," to use the words of the immortal Davy, "whose beginning is PLEASURE, its progress KNOWLEDGE, its objects TRUTH and UTILITY."

Solid matter naturally present in, or artificially diffused through, flame, produces its light.

Now then, let us experiment upon this matter or proposition. I will hold this white China saucer over the flame of the "spirit-lamp" for a moment. Now look, there is no smoke or soot upon it; but a round spot of smoke or soot appears on it directly, if I hold it in a similar way, that is, so as to touch the point of the flame of the candle.

This smoke or soot is *charcoal*, or, chemically speaking, *carbon*; it is *solid matter*, and therefore causes the light of the candle-flame, as you will see directly; wax contains more than eighty parts per cent. of carbon, but spirit of wine contains only about half as much.

Here is a bit of charcoal; I will powder it very fine; and now dust a little of it into the spirit-flame: look how the light is increased directly! approximating in some degree to the light of the candle-flame.

I have just now told you, that a very large quantity of carbon naturally exists in the wax, as one of its chemical constituents; well, its *ignition*, and then *combustion*, cause the great light of the candle-flame.

The carbon is far more finely divided by nature, than it can be by art; therefore, in the flame, you do not see little individual particles floating about, undergoing *ignition* and *combustion*, as you do, when I arti-

ficially divided the charcoal (carbon), and shook it into the spirit-flame.

But I have said that spirit of wine contains carbon; then, why is its flame so feeble and so pale? Because, in the first place, there is much *less* carbon, and in the next, this is all very suddenly and very completely *burned*; none is *diffused* through the flame in a *solid ignited* state previous to combustion.

Look at the bottom part of this candle-flame, nearest the wax, where it first meets with the air which rushes to its support; see how *blue* it burns, something like spirits of wine, because, just at that point *all* the carbon is *burned*, effectually burned, none is diffused in an *ignited* state.

I hold the point of a fine sewing-needle in the blue part of the flame,—see, it is not blackened with soot—nor will it be if held even a little higher up; I will now hold it in the main body of the light, where abundance of carbon is diffusing, floating, and igniting in the flame, and now see how the soot collects upon it. I wipe this off, and now hold the needle-point over the very point of the flame, and no soot is deposited on it, because there again all the carbon is burned.

In a candle, then, if all the carbon were *suddenly* and *completely* burned without first undergoing *ignition*, we should have very little light produced; and by giving the flame plenty of air, we can effect this end, and diminish the light.

Here is a bit of tobacco-pipe, six inches long, with a very small bore; I hold it horizontally, thus, in the flame of the candle, very near the wick; I now will gently blow air through the pipe into the flame, and when I do so, you will see the flame quit its upright position, and assume one in the direction of the pipe, that is, horizontal, at the same time becoming *blue*, because all, or very nearly all, its solid carbon is suddenly and completely burned by the full supply of air.

You, doubtless, have heard of the instrument called the “blow-pipe,” and of the intense heat that it produces: well, a blowpipe is only a simple tube, generally of brass, bent into a convenient shape, and having a small aperture at one extremity; this is placed nearest the flame of the candle or lamp, and the mouth being applied to the other, forces air into the flame as I did just now, producing a great heat, and thus small particles of gold or silver may be very easily melted.

The great light of gas-flames depends upon the carbon that coal-gas contains. Did you ever observe on a windy night, how uncovered gas-flames, in open-fronted shops, every now and then would suddenly burn *blue*; or, on an “illumination night,” how the gas-flames on some parts of the devices would burn blue, whilst others were blazing brightly? Well, both effects are simply owing to the wind or air, completely burning all the carbon; and the same thing happens if there is not a strong supply of gas to the burners, even when the air is calm.

It requires, therefore, some little skill rightly to apportion the supply of air to argand oil and gas-burners, so that, on the one hand, carbon may not escape unconsumed, in the form of smoke, and on the other, that it may not be so suddenly and completely consumed as to emit but little light.

Such, then, is a little, and a very little, of the chemical philosophy of so simple a contrivance as a candle.

THE spirit of pride, petulance, and prejudice, is the spirit not of wisdom, but of folly; to the progress of knowledge, whether human or divine, it is ever fatal.—RENNELL.

THE FACULTY OF SPEECH.

THE due and proper use of any natural faculty or power, is to be judged of by the end and design for which it was given us. The chief purpose for which the faculty of speech was given to man, is, plainly, that we might communicate our thoughts to each other, in order to carry on the affairs of the world; for business, and for our improvement in knowledge and learning. But the good Author of our nature designed us not only necessities, but likewise enjoyment and satisfaction, in that being He hath graciously given, and in that condition of life He hath placed us in.

There are secondary uses of our faculties; they administer to delight, as well as to necessity: and as they are equally adapted to both, there is no doubt but He intended them for our gratification, as well as for the support and continuance of our being. The secondary use of speech is to please and be entertaining to each other in conversation. This is in every respect allowable and right: it unites men closer in alliances and friendships; gives us a fellow-feeling of the prosperity and unhappiness of each other; and is in several respects serviceable to virtue, and to promote good behaviour in the world. And, provided there be not too much time spent in it, if it were considered only in the way of gratification and delight, men must have strange notions of God and of religion, to think that He can be offended with it, or that it is any way inconsistent with the strictest virtue. But the truth is, such sort of conversation, though it has no *particular* good tendency, yet it has a *general* good one: it is social and friendly, and tends to promote humanity, good-nature, and civility.

The government of the tongue, considered as a subject of itself, relates chiefly to conversation; to that kind of discourse which usually fills up the time spent in friendly meetings, and visits of civility. And the danger is, lest persons entertain themselves and others at the expense of their wisdom and their virtue, and to the injury or offence of their neighbour. If they will observe, and keep clear of these, they may be as free, and easy, and unreserved, as they can desire.—BISHOP BUTLER.

PALEY has beautifully, and with his usual felicity, described the unity and universality of Providential care, as extending from the construction of a ring of 200,000 miles diameter, to surround the body of Saturn, and be suspended, like a magnificent arch above the heads of his inhabitants, to the concerting and providing an appropriate mechanism for the clasping and reclasping of the filaments in the feather of the humming-bird. The geologist describes a no-less striking assemblage of curious provisions and delicate mechanisms, extending from the entire circumference of the crust of one plant, to the minutest curl of the smallest fibre in each component lamina of the pen of the fossil loligo. He finds these pens uniformly associated with the same peculiar provision of an internal ink-bag*, which is similarly associated with the pen of the living loligo in our actual seas; and hence, he concludes, that such a union of contrivances so nicely adjusted to the wants and weaknesses of the creatures in which they occur, could never have resulted from the blindness of chance, but could only have originated in the will and intention of the Creator.—BUCKLAND'S *Bridgewater Treatise*.

* The preservation of so delicate a fluid as the ink which was contained within the bodies of extinct species of the loligo, or sepia, is established by the recent discovery, by a lady, of numerous specimens in the lias of Lyme Regis, in which the ink-bags are preserved in a fossil state, still distended as when the creature was alive. “I have drawings,” says Dr. Buckland, “of the remains of extinct species, prepared with their own ink! With this fossil ink I might record the fact, and explain the causes of its wonderful preservation. I might register the proofs of instantaneous death, detailed in these ink-bags; for they contain the fluid which the living sepia emits in the moment of alarm!”

SILVER MINES IN GREAT BRITAIN.

It is not usual to consider the precious metals as among the mineral productions of our own soil, and there are probably many persons, who are hardly aware of the fact of their ever having been found there. It may not, therefore, be uninteresting to know, that, although generally existing in comparatively small quantities, both gold and silver occur in several parts of Great Britain, and that the latter metal has sometimes been found in considerable abundance.

Gold has been found in grains and small rounded masses embedded in sand and gravel, in several valleys in Cornwall; in one instance a fragment was found equal in weight to about ten guineas. Gold has also been found, but sparingly, at two or three places in Devonshire.

Grains of gold have occasionally been found in many of the rivers in Scotland; and in the reign of Elizabeth, it is said that considerable workings were carried on for that metal.

In the county of Wicklow, in Ireland, gold was discovered, some years ago, to the value of several thousand pounds. The gold occurred in small fragments, varying in size from a grain of sand, to pieces some ounces in weight.

It will be observed, that, in all these instances, the gold has occurred in what is termed an *alluvial* state, that is, mixed up and embedded in sand and gravel. In no case does it appear that any *vein* or regular *deposit* of this metal has been known to occur in Great Britain.

Silver is also found in many parts of England, and in far more considerable quantities than the casual discoveries of gold before noticed. In several parts of Cornwall there are veins containing both *native* silver (silver in a natural state of purity) and various *silver ores*. The Herland mines, some years ago, produced the value of about £8000. of this metal, and several others a less quantity. In the mining country on the borders of Cornwall and Devonshire, near the river Tamar, silver is found in many of the mines, one of which, called Wheal Betsy, produces annually about 4000 or 5000 ounces of this metal, the silver being here, as indeed is generally the case in the mines of Europe, combined with the ore of lead, termed *galena*, a blue lead-ore. An extremely rich vein of silver has, within the last two or three years, been discovered in this district, and the returns of silver from several of the mines have at different periods been considerable.

In several parts of Wales, more especially in the northern portion of the principality, a large quantity of silver has formerly been obtained from the mines, which even at the present time produce annually some thousand ounces.

The same may be said of the great lead-mine districts of the north of England, more especially that in the vicinity of the town of Alston, in Cumberland, from which a considerable quantity of silver is obtained by refining the lead.

In Scotland the ores of silver exist, and the value of £50,000 of this metal is said to have been obtained at Alva, in Stirlingshire. Silver has also been found, but generally in small quantities, at Cronbane and other places in Ireland.

The principal object of this paper is, however, to describe, perhaps, the most remarkable instance known, of the occurrence of silver in Great Britain, an instance rendered still more interesting from the noble and patriotic use to which the wealth thus obtained was applied. We allude to the lead and silver mines of Cardiganshire, which, more than two

hundred years ago, afforded Sir Hugh Myddelton the means of executing that great work, the "New River," which even at the present period supplies nearly half the quantity of water which is daily used in the metropolis*.

These mines are situated in the county of Cardigan, in South Wales, about seven miles east of the town of Aberystwith, in a wild and uncultivated district, bordering on the mountain called Plinlimmon, the highest in this part of Wales. One of the mines is called Cwm Symlog, and lies in a deep hollow or ravine, *Cwm* being the Welsh word for an abrupt or mountainous valley. The other, called Darren, is about a mile distant, and situated on the summit and declivity of a lofty hill, of a somewhat conical form, called Pen y Darren, *Pen* being a Welsh word signifying the head or summit of a mountain. The top of this hill is occupied by an ancient fortification, consisting of a rectangular space, enclosed by several trenches and embankments, which, in addition to its natural steepness, must have rendered it at one period a place of considerable strength.

This fortification is attributed, with great probability, to the Romans; and it is a curious fact, that the trenches surrounding it actually cut into the veins of lead-ore, which, in this part of Wales, often show themselves within a few feet of the surface. Little doubt can be entertained, therefore, that this metalliferous deposit was discovered in making the intrenchments, and that, consequently, the mine was worked in the time of the Romans, who are well ascertained to have wrought some of the lead-mines of Derbyshire during the period they held possession of Britain.

About the middle of the sixteenth century, Darren, and the adjoining mine of Cwm Symlog, were extensively and profitably worked, under the management of some German miners, that nation having been distinguished from a very remote period for skill in mining operations.

During the reign of James the First these mines became the property of the celebrated Sir Hugh Myddelton, and were worked by him with great success, as they are stated to have made a profit of about £25,000 per annum, which must have been an enormous sum in those days.

The use to which the wealth thus acquired was applied, is too well known, to require further notice here. The great and patriotic undertaking of bringing the New River to London, unhappily ruined the projector, although it has, since his time, been a fruitful source, both of individual benefit and public advantage.

After the death of Sir Hugh Myddelton, these mines were leased by a Mr. Bushell, who is stated to have been secretary to the celebrated Lord Chancellor Bacon. This gentleman had to encounter many difficulties, owing to the increased depth of the mines, and other causes; he at length, however, succeeded in bringing them into a profitable state, and obtained immense wealth from them.

It is remarkable, that Mr. Bushell also employed the riches thus acquired in a manner equally spirited and disinterested with his predecessor. During the unhappy civil wars in the reign of Charles the First, Mr. Bushell, who was a zealous royalist, followed the example of many noblemen and gentlemen attached to the royal cause, and sacrificed his private fortune by advancing large sums of money to the king. At a later period, he even raised a force from among his miners and dependants, in support of that unfortunate monarch.

* For an interesting account of this great work, the reader is referred to the *Saturday Magazine*, Vol. I., p. 183.

After this period, the mines appear to have fallen into decay, and although several attempts have since been made to rework them, they have been attended with little or no success; the mineral wealth of the spot having probably, in course of time, become exhausted.

The chief produce of these mines was lead-ore, containing, however, a very considerable proportion of silver, stated at seventy or eighty ounces per ton. The quantity of silver thus obtained was so large, that, in the early part of the seventeenth century, a mint was established for its coinage, in the ancient castle of Aberystwith. Many of the silver pieces coined at this mint are still in existence, some of them being of the value of twenty shillings, and others of ten shillings, but of course the greater number were for smaller sums. These coins all bear the impression of an ostrich-feather, no doubt in reference to the well-known armorial bearing of the Prince of Wales, the nominal sovereign of the principality.

Aberystwith Castle was much injured during the civil wars, when it was besieged and finally taken by Cromwell. A gateway, and considerable ruins, are, however, still in existence, and form a picturesque feature in the scenery of the town, which is delightfully situated on the coast, commanding a fine view over Cardigan Bay.

TO AN EARLY PRIMROSE.

MILD offspring of a dark and sullen sire!
Whose modest form, so delicately fine,
Was nursed in whirling storms,
And cradled in the winds.

Thee, when young Spring first questioned Winter's sway,
And dared the sturdy blusterer to the fight,
Thee on this bank he threw
To mark his victory.

In this low vale, the promise of the year,
Serene thou openest to the nipping gale,
Unnoticed and alone,
Thy tender elegance.

So virtue blooms, brought forth amid the storms
Of chill adversity; in some lone walk
Of life she rears her head,
Obscure and unobserved;

While every bleaching breeze that on her blows
Chastens her spotless purity of breast,
And hardens her to bear
Serene the ills of life.—KIRKE WHITE.

THE aloe-flower is white as snow, and highly ornamental, but, like the silver locks of age, it is the blossom of the grave; for the plant lives many years, but only blooms once, and dies immediately afterwards.—*Portugal and Gallicia.*

It was not the intention of Providence that men should pass a few years here in ignoble sloth, either with indolence in safety, or pusillanimity in danger; but that we should come forth, and act some useful and honourable part on that theatre where we have been placed; might glorify Him that made us; and, by a steady perseverance in virtue, rise in the end to an immortal state.—MATHEW.

MODERATION.—It should be an indispensable rule in life, to contract our desires to our present condition; and, whatever may be our expectations, to live within the compass of what we actually possess. It will be time enough to enjoy an estate when it comes to our hands; but if we anticipate our good fortune, we shall lose the pleasure of it when it arrives, and may possibly never possess what we have so foolishly counted upon.—ADDISON.

THE BRITISH CONSTITUTION.

UNDER its influence, this nation has attained a degree of grandeur and prosperity, which (I use no boastful terms) has not been surpassed in the history of any age or country of the world. Life and property secured by impartial and effectual laws, which shield alike the rich and poor; Justice maintaining a firm but lenient sway, her balance never falsely held, her sword but seldom stained with blood;—freedom of speech and action, restrained by no other bounds than the peace of society and the protection of individual character require;—the useful arts carried to a perfection beyond all parallel; the whole land one scene of active industry; its fields clothed with the rich products of universal culture; its towns swarming with a busy population, and resounding with the processes of prosperous labour; its ports crowded with the sails of every clime; its commerce wafted to the most distant shores; its colonial and tributary dependencies an empire in themselves;—at home, its hearths and altars hallowed by domestic virtue, and moral worth, and heartfelt piety; education diffusing its benignant influence to dispel the prejudices, and soften the rudeness, of vulgar ignorance; the social habits of the middle classes characterized by countless tokens of cheerful and substantial comfort; the circles of a higher rank distinguished by all that elegance and refinement which form the grace and charm of polished life, but which never elsewhere have been found united with the same degree of public liberty;—blessings, as multiplied as these, overspreading the community; no class without some participation in the general prosperity; and a path ever open for merit to rise from the humblest to the highest stations;—the national fame enriched with so many trophies of military and naval heroism, so many triumphs of genius and science;—what can even imagination add to complete the picture of a happy land? May all, who share in the enjoyment of these blessings, still have the wisdom to revere, and support, and guard, the noble Constitution under which such a picture has been realized!

[Dr. GRAHAM's Discourse on the 30th of January, 1837.]

"It is a principal point of duty, to assist another most when he stands most in need of assistance." There are none who deserve superiority over others in the esteem of mankind, who do not make it their endeavour to be beneficial to society, and who, upon all occasions which their circumstances of life can administer, do not take a certain unfeigned pleasure in conferring benefits of one kind or other. Those whose great talents and high birth have placed them in conspicuous stations of life, are indispensably obliged to exert some noble inclinations for the service of the world, or else such advantages become misfortunes, and shade and privacy are a more eligible portion. Where opportunities and inclinations are given to the same person, we sometimes see sublime instances of virtue, which so dazzle our imagination, that we look with scorn on all which in lower scenes of life we may ourselves be able to practise. But this is a vicious way of thinking, and it bears some spice of romantic madness for a man to imagine that he must grow ambitious, or seek adventures, to be able to do great actions. It is in every man's power in the world who is above mere poverty, not only to do things worthy, but heroic. The great foundation of civil virtue is self-denial; and there is no one above the necessities of life, but has opportunities of exercising that noble quality, and doing as much as his circumstances will bear for the ease and convenience of other men; and he who does more than ordinary men practise upon such occasions as occur in his life, deserves the value of his friends, as if he had done enterprises which are usually attended with the highest glory. Men of public spirit differ rather in their circumstances than their virtue; and the man who does all he can, in a low station, is more a hero than he who omits any worthy action he is able to accomplish in a high one.—*Spectator.*

VALLE CRUCIS, OR LLAN EGLWEST ABBEY.

THESE beautiful ruins are situated about two miles from Llangollen, in Denbighshire, on the right of the road to Ruthin, in the centre of a small meadow, at the foot of a lofty hill, called Bron Vawr. The situation is the most beautiful and secluded in the kingdom, and the remains of the Abbey are the finest ecclesiastical ruins in Wales.

This Abbey was a house of Cistercians, founded in the year 1200, by Madoc ap Gryffydd Maylor, Prince of Powis, and must at one period of its history have been well endowed; for an old poet, who flourished in the fifteenth century, highly commends the hospitality of the Abbots; and when describing their mode of living, observes, "the table was usually covered with four courses of meat, served up in silver dishes, and sparkling claret the usual beverage." The prosperous state of this Abbey caused it to fall under the notice of Henry the Eighth, and it was the first that was suppressed in Wales, when its estates were confiscated. It derived its name of *Crucis*, from an adjacent cross, called *Eliseg's Pillar*, or, as some say, from its possessing a piece of the true cross. At present, the greater part of its area is occupied by a farm-house, barns, and other farm-buildings, but enough of the ancient structure still remains to form a beautifully picturesque object, and to give clear indications of its former grandeur.

Three rows of groined arches, on single round pillars, support the dormitory, which is now a hay-loft. A chimney

in one of the bed-chambers has the relic of a sepulchral monument, with an imperfect inscription; the floors are remarkably thick, and partly supported by rows of Gothic arches. The cruciform Church, (says Britton,) built in different styles of architecture, has the east and west end, with a large portion of the transept, still remaining; forming a most interesting ruin.

The Abbey itself appears to be more ancient than the Church, having three long lancet-shaped windows, that tend to give it a ponderous appearance.

The Church seems to have had a decorated doorway, over which was a large circular-headed window, consisting of three divisions, richly ornamented both in its mullions and tracery; and above this is a marigold window, of still more elegant workmanship, containing eight divisions. The capitals of the pilasters within the building finish with elegant foliage. The transept contains a small cloister of two arches, and a mural sepulchral arch, that probably once encircled the tomb of the founder. The whole length of the church was one hundred and eighty feet. The breadth of the nave was thirty-one feet, and of the aisles thirteen feet. The edifice is principally constructed of the *schistose* material dug in the vicinity; but the doorways, window-frames, and ornamental parts, are all of freestone. The area of the Church presents a number of tall ash-trees, which overtopping some parts of the ruin, and hiding others from the sight, blend vegetation with mouldering walls, and contribute considerably to its picturesque effect.

Eliseg's Pillar, situated in a meadow about three hundred yards from the Abbey, is supposed by Mr. Pennant to be the most ancient British monument, bearing an inscription, now existing. It is said to have been erected to the memory of *Eliseg*, the father of *Brochwel*, Prince of Powis, who was slain by the Saxons at the battle of Chester, in the year 607.



VALLE CRUCIS ABBEY.